

## ABSTRACT OF THE DISCLOSURE

Information to be stored is input to a plurality of information carrier storage means that interact with each other. A unit amount of information carriers is added to a position selected from the information carrier storage means, and nonlinear diffusion of information carriers is executed from the selected information carrier storage means to its neighboring information carrier storage means, and at the same time, nonlinear dissipation is executed from the information carrier storage means. At that time, the dissipation amount is determined so that the amount adding the difference between the amount of addition and the amount of dissipation to the input representation does not exceed a predetermined threshold value. When equilibrium is confirmed as a result of judgement whether changes in amount of information carriers of each information carrier storage means has become small or not, the amount of information carriers stored in the information carrier storage means is output as a numerical value.